Robot Design

Mathew

Team Number 1 Corgis

Judging Room _____

For each Robot Design criteria, clearly mark the box that best describes the ability of the team to demonstrate or provide evidence (such as analysis or test data) that their robot and processes meet that level of achievement. If the team does NOT describe a particular criteria at all, then put an 'X' in the first box for Not Demonstrated (ND). Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. Use the back for additional comments if needed.

		Beginning	Developing	Accomplished	Exemplary
Mechanical Design	**Durability**	Robot designed to maintain structural integrity and have the ability to withstand rigors of competition			
	ND	quite fragile; breaks a lot	frequent or significant faults/repairs	rare faults/repairs	sound construction; no repairs
	Mechanical Efficiency	Robot designed to be easy to repair, modify, and be handled by technicians			
	ND	excessive time to repair/modify	inefficient to repair/modify	appropriate time to repair/modify	streamlined time to repair/modify
	Mechanization	Robot mechanisms designed to move or act with appropriate speed, strength and accuracy for intended tasks (propulsion and execution)			
	ND	imbalance of speed, strength and accuracy on most tasks	imbalance of speed, strength and accuracy on some tasks	appropriate balance of speed, strength and accuracy on most tasks	appropriate balance of speed, strength and accuracy on every task
Programming	**Programming Quality**	Programs are appropriate for the intended purpose and should achieve consistent results, assuming no mechanical faults			
	ND	would not achieve purpose AND would be inconsistent	would not achieve purpose OR would be inconsistent	should achieve purpose repeatedly	should achieve purpose every time
	Programming Efficiency	Programs are modular, streamlined, and understandable			
	ND	excessive code and difficult to understand	inefficient code and challenge to understand	appropriate code and easy to understand	streamlined code and easy for anyone to understand
	Automation/Navigation	Robot designed to move or act as intended using mechanical and/or sensor feedback (with minimal reliance on driver intervention and/or program timing)			
	ND	frequent driver intervention to aim AND retrieve robot	frequent driver intervention to aim OR retrieve robot	robot moves/acts as intended repeatedly w/ occasional driver intervention	robot moves/acts as intended every time with no driver intervention
Strategy & Innovation	**Design Process**	Developed and explained improvement cycles where alternatives were considered and narrowed, selections tested, designs improved (applies to programming as well as mechanical design)			
	ND	organization AND explanation need improvement	organization OR explanation need improvement	systematic and well-explained	systematic, well-explained and well-documented
	Mission Strategy	Clearly defined and described the team's game strategy			
	ND	no clear goals AND no clear strategy	no clear goals OR no clear strategy	clear strategy to accomplish well-defined goals	clear strategy to accomplish most/all game missions
	Innovation	Team identifies their sources of inspiration and creates new, unique, or unexpected feature(s) (e.g. designs, programs, strategies or applications) that are beneficial in performing the specified tasks			
	ND	No original feature(s)	original feature(s) with some added value or potential	original feature(s) with the potential to add significant value	original feature(s) that add significant value

Comments

Great Job…

modularity

Think about…

Innovation Project

Mathew

Team Number Cubs

Judging Room 8A

For each skill area, clearly **mark the box that best describes the team's accomplishments.** Teams should demonstrate everything at the level; if they are missing part, mark the level below. If the team does not demonstrate an area, put an 'X' in the first box for Not Demonstrated (ND). Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. Use the back for additional comments if needed.

*Required for Award Consideration

		Beginning	Developing	Accomplished	Exemplary
Research	**Problem Identification** *	Clear definition of the problem being studied			
	ND	unclear; few details	partially clear; details missing	mostly clear; detailed	clear; very detailed
	Sources of Information	Quality and variety of data/evidence and sources cited			
	ND	minimal quality; variety limited	quality OR variety need improvement; did not include professional(s)	sufficient quality and variety; included professional(s)	extensive quality and variety; included multiple professionals
	Problem Analysis	Depth to which the problem was studied and analyzed by the team, including extent of analysis of existing solutions			
	ND	minimal study; no analysis	minimal study; some analysis	sufficient study and analysis	extensive study and analysis
Innovative Solution	**Team Solution***	Clear explanation of the proposed solution and description of how it solves the problem			
	ND	difficult to understand	some parts confusing	understandable	easy to understand by all
	Innovation	Degree to which the team's solution makes life better by improving existing options, developing a new application of existing ideas, or solving the problem in a completely new way			
	ND	existing solution/application	solution/application contains some original element(s)	original solution/application; potential added value	original solution/application; demonstrated added value
	Solution Development	Systematic process used to select, develop, evaluate, test, and improve the solution (Implementation could include cost, ease of manufacturing, etc.)			
	ND	process AND explanation need improvement	process OR explanation need improvement	systematic process included evaluation	systematic process included evaluation; implementation considered
Presentation	**Sharing***	Degree to which the team shared their Project before the tournament with others who might benefit from the team's efforts			
	ND	shared with family / friends	shared outside family / friends (such as classmates)	shared with one audience who may benefit OR one professional	shared with multiple audiences who may benefit OR multiple professionals
	Creativity	Imagination used to develop and deliver the presentation			
	ND	minimally engaging OR unimaginative	engaging OR imaginative	engaging AND imaginative	very engaging AND exceptionally imaginative
	Presentation Effectiveness	Message delivery and organization of the presentation			
	ND	unclear OR disorganized	partially clear; minimal organization	mostly clear; mostly organized	clear AND well organized

Comments

Great Job....

- good project problem
- citing source
- economic data, costs
- loved seeing the plastic result, nice chemistry

Think about...

- Introducing your team
- Presenting without reading slide
- Showing the process of experimentation with the solution

Innovation Project

Team Number Corgis

Judging Room

Danielle

For each skill area, clearly **mark the box that best describes the team's accomplishments.** Teams should demonstrate everything at the level; if they are missing part, mark the level below. If the team does not demonstrate an area, put an 'X' in the first box for Not Demonstrated (ND). Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. Use the back for additional comments if needed.

*Required for Award Consideration

		Beginning	Developing	Accomplished	Exemplary
Research	**Problem Identification ***	Clear definition of the problem being studied			
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Comments

stay together; make sure everyone can be seen

Great Job….

- strong innovative solution
- detailed examples of product and walkthrough of process
- good walkthrough of interview; be sure to include benefits and quantify

Think about…

- introduce all team members & ensure everyone speaks and answers questions
- make eye contact (less reading)
- explain more on testing solution & example of finished product (used to wrap a small pkg)

FIRST LEGO LEAGUE Project

Team Number Corgi

Judging Room _____

Directions: For each skill area, clearly **mark the box that best describes the team's accomplishments.** Teams should demonstrate everything at the level; if they are missing part, mark the level below. If the team does not demonstrate an area, put an 'X' in the first box for Not Demonstrated (ND). Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. *When you have completed the evaluation, please circle the team's areas of strength.*

Research

	Beginning	Developing	Accomplished	Exemplary
Problem Identification *	Clear definition of the problem being studied			
ND	unclear; few details	partially clear; details missing	mostly clear; detailed	clear; very detailed
Sources of Information	Quality and variety of data/evidence and sources cited			
ND	minimal quality; variety limited	quality OR variety need improvement; did not include professional(s)	sufficient quality and variety; included professional(s)	extensive quality and variety; included multiple professionals
Problem Analysis	Depth to which the problem was studied and analyzed by the team, including extent of analysis of existing solutions			
ND	minimal study; no analysis	minimal study; some analysis	sufficient study and analysis	extensive study and analysis

Comments

Need to identify problem applies for plastic wrap, not packaging material.

– Team did not introduce themselves. – good use of cost of problem.

Innovative Solution

	Beginning	Developing	Accomplished	Exemplary
Team Solution*	Clear explanation of the proposed solution and description of how it solves the problem			
ND	difficult to understand	some parts confusing	understandable	easy to understand by all
Innovation	Degree to which the team's solution makes life better by improving existing options, developing a new application of existing ideas, or solving the problem in a completely new way.			
ND	existing solution/application	solution/application contains some original element(s)	original solution/application; potential added value	original solution/application; demonstrated added value
Solution Development	Systematic process used to select, develop, evaluate, test, and improve the solution (Implementation could include cost, ease of manufacturing, etc.)			
ND	process AND explanation need improvement	process OR explanation need improvement	systematic process included evaluation	systematic process included evaluation; implementation considered

Comments

– Through demo understood solution. The demo should be part of the presentation. The demo brought a great visual of their solution. If possible present a package with your solution. – Need to share benefit of solution (impact to environment + cost).

Presentation

	Beginning	Developing	Accomplished	Exemplary
Sharing*	Degree to which the team shared their Project before the tournament with others who might benefit from the team's efforts			
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Comments

- Good feedback from expert, but what was the feedback on your solution.

– Need to be more organized in presentation of solution.

Strengths: Research | Innovative Solution | Presentation

*Required for Award Consideration

1. EVERYBODY NEEDS TO PARTICIPATE. CORGIS.
2. GREAT PROBLEM DEFINITION, SOLUTIONS & SAMPLES.
3. EXPAND ON ISSUES DISCUSSED WITH AMY M. AND HOW YOUR SOLUTION ADDRESSES THEM.
4. CLARIFY HOW A "UPS" WORKER WILL USE YOUR PRODUCT.
5. PROVIDE MORE STATS ON PROBLEM.
   e.g TONNES OF WASTE/DAY, INCREASE COST IN REFUSE COLLECTION & DEMAND ON DUMP SITES
6. INITIAL SET UP OF PRESENTATION NEEDS TO BE PRACTICED.
7. ASSIGN 2 TEAM MEMBERS TO SHOW SAMPLES TO JUDGES.
8. DISCUSS THE ~~INCLUDE~~ INGREDIENTS & ENVIRONMENTAL "FOOT PRINT" IF ANY.